

## DIAGNOSES OF NEW BORNEAN CULICIDAE.

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The following are preliminary diagnoses of new species of CULICIDAE from Kuching, Sarawak. The specimens were received from Mr. J. C. Moulton, and either were collected by the donor, or formed part of the old collection of mosquitos in the Sarawak Museum, which was for the most part obtained in the neighbourhood of Kuching by Messrs. J. Hewitt and J. E. A. Lewis. The types are all in the British Museum.

**Armigeres confusus**, sp. n.

Coloration as in *A. jugraensis* (Leic.)\* but the seventh sternite in both sexes is clothed with black instead of white scales. Basal lobes of side-pieces of male genitalia with a tuft of hairs, whereas in *A. jugraensis* there is only a single bristly spine in this position.

7 ♂ 4 ♀ (*Moulton, Hewitt and Lewis* ?).

**Armigeres kuchingensis**, sp. n.

Coloration and scale characters as in *A. hybridus*, Edw. Male genitalia: claspers strongly curved; basal lobes of side-pieces with three plates, which are much narrower than those of *A. hybridus* and almost spine-like; in addition there are three short bristles in one row with the three spine-like plates.

2 ♂ 6 ♀, third mile Rock Road, 24 and 27. vii. 1914, females biting collector; 1 ♀, presumably this species, Kuching Reservoir, 30. vii. 1914 (*J. C. Moulton*).

**Aedes ? curtipes**, sp. n.

Colour almost uniformly dark brown, only varied by the whitish basal lateral spots on segments 2-7 of the abdomen, and the somewhat lighter under sides of the femora. Head and scutellum with broad flat scales. Thorax rather densely bristly. Legs somewhat shorter and stouter than in other members of the genus; the front metatarsi noticeably shorter than the remaining joints taken together; claws all simple. Lateral vein-scales ovate-lanceolate, blunt at the tip. Fork-cells somewhat longer than their stems, the upper one with its base a little nearer to the base of the wing than that of the lower.

*Length* just over 3 mm.

2 ♀ (including type) from the old Sarawak Museum collection; also 1 ♀ from Membakut, N. Borneo (*Dr. R. Roper*) and 1 ♀ from Klang, Selangor (*Dr. G. F. Leicester*).

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\* I find that I was mistaken in giving *A. jugraensis* as a synonym of *A. joloensis* (Ludlow). Specimens of the latter sent me by Dr. Ludlow evidently represented only a slight colour variation of *A. obturbans*.

An obscure species; distinguished from *Stegomyia amesii*, Ludlow (= *S. fusca*, Leic.) by the broader wing-scales and thicker legs; from *Mimomyia minima* (Ludlow) by the longer fork-cells, more pointed abdomen and shorter second antennal joint; and from *Aedes butleri* and other similarly coloured species by the somewhat broader wing-scales and thicker legs.

**Culex mimulus**, sp. n.

Differs from *C. mimeticus*, Noé, as follows:—it is, on the average, rather smaller; the third longitudinal vein is usually entirely dark-scaled, though the middle portion is sometimes (especially in the female) pale-scaled (in *C. mimeticus* the third vein is always pale-scaled except at the base and tip). Male genitalia closely resembling those of *C. vishnui*, Theo., the second plate of the harpagones having five divisions at its tip, arranged something like the spread fingers of a hand (in *C. mimeticus* these plates are of a different shape and have only two divisions at their tips).

Numerous specimens in the old Sarawak Museum collection; others collected by Mr. J. C. Moulton.

This seems to be the representative in the Oriental region of the Palaearctic *C. mimeticus*. Probably all specimens recorded as *mimeticus* from the Oriental region are this species; at any rate the British Museum possesses specimens from the Malay States, Ceylon and India, while those from Hong Kong, North India, Palestine and Cyprus are the true *mimeticus*.

**Culiciomyia spathifurca**, sp. n.

Differs only from *C. fragilis* in the male genitalia. The side-pieces are larger and more rounded; the claspers are nearly straight, somewhat spatulate towards their tips, while from near the base on the inner side of each arises a long, tapering, smooth process, sinuous before its tip, as long as the clasper proper. In *C. fragilis* the clasper is bent in the middle, pointed and devoid of the basal process. There are other small differences which need not be described since that in the claspers is as striking as in any two species of mosquitos.

1 ♂, in house, Kuching, 22. vii. 1914 (*J. C. Moulton*). A female from Kuching Reservoir, 30. vii. 1914, may be either this species or *C. fragilis*.

**Uranotaenia brevirostris**, sp. n.

*Head* clothed with dark brown scales, proboscis and palpi black, the proboscis hardly more than two-thirds as long as the abdomen. *Thorax* yellow-ochreous, with numerous long black bristles and with scattered small pale yellowish scales; scutellum with small flat pale brown scales; pleurae unscaled; no line of flat scales in front of the wing-base. *Abdomen* dark brown dorsally, yellowish ventrally, without spots or bands. *Legs* normal in structure, uniformly clothed with dark brown scales. *Wings* with normal venation; scales brownish, much darker towards the costa; lateral vein-scales ovate.

Eighteen specimens, including both sexes. Bred from pitcher plant, 1907 (*J. Hewitt*).

Differs from *U. moultoni*, Edw., in the yellow instead of black scales on the mesonotum, and in the somewhat less striking contrast in colour between the thorax and abdomen.

**Uranotaenia obscura**, sp. n.

Differs from the preceding in having the integument and scales almost uniformly dark brownish, only the pleurae and the under side of the abdomen being somewhat lighter.

Fourteen specimens, including both sexes, from the old collection of the Sarawak Museum.

**Rachionotomyia nepenthis**, sp. n.

*Head* with the flat scales dark brown or dark bluish-grey, according to the incidence of light; a narrow border round the eyes paler, but not distinctly blue. Clypeus bare. Proboscis barely longer than the abdomen, but quite thin at the tip. *Thorax* as in *R. aranoi*des, thickly clothed with dark brown, broadly spindle-shaped scales; prothoracic lobes and the space on the mesonotum behind them clothed with dark brown scales; pleurae and coxae with flat silvery-white scales. *Abdomen* with the dorsum dark brown, with a continuous lateral light brownish stripe, which is not quite even in width but broadens out somewhat on the hind margin of each segment; venter ochreous. Male genitalia resembling those of *R. aranoi*des, but the appendages of the ninth sternite with five (not three) more slender spines. *Legs* dark brown, under sides of femora ochreous. Front and middle claws of male very unequal, on the front legs the larger claw bears a distinct tooth; hind tarsi with a single minute claw. *Wings* with dark brown scales; the scales in the lateral series almost linear; long lateral scales present on the upper margin of the basal part of the fourth longitudinal vein. Base of upper fork-cell a little nearer the apex of the wing than that of the lower.

*Length* 3 mm.

4 ♂ 2 ♀, "Bred from pitcher plant, Nov. 1907" (? *J. Hewitt*).

Differs from *R. aranoi*des in the shorter proboscis, brown and not white-scaled patch behind the prothoracic lobes, slightly irregular lateral abdominal stripe and the absence of one of the claws on the hind legs.

**Rachionotomyia proxima**, sp. n.

Closely resembles *R. coeruleocephala* (Leic.), differing as follows:—Mesonotum with yellow instead of black scales; larger claw of front legs of male perfectly simple, not notched; bristles at the tips of the appendages of the ninth sternite of the male longer.

1 ♂ (type) 2 ♀, from old collection of Sarawak Museum; also 1 ♂ from Ulu Klang, Selangor (*Dr. G. F. Leicester*) and 1 ♂ from Ulu Gombak, Selangor (*Dr. A. T. Stanton*).

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